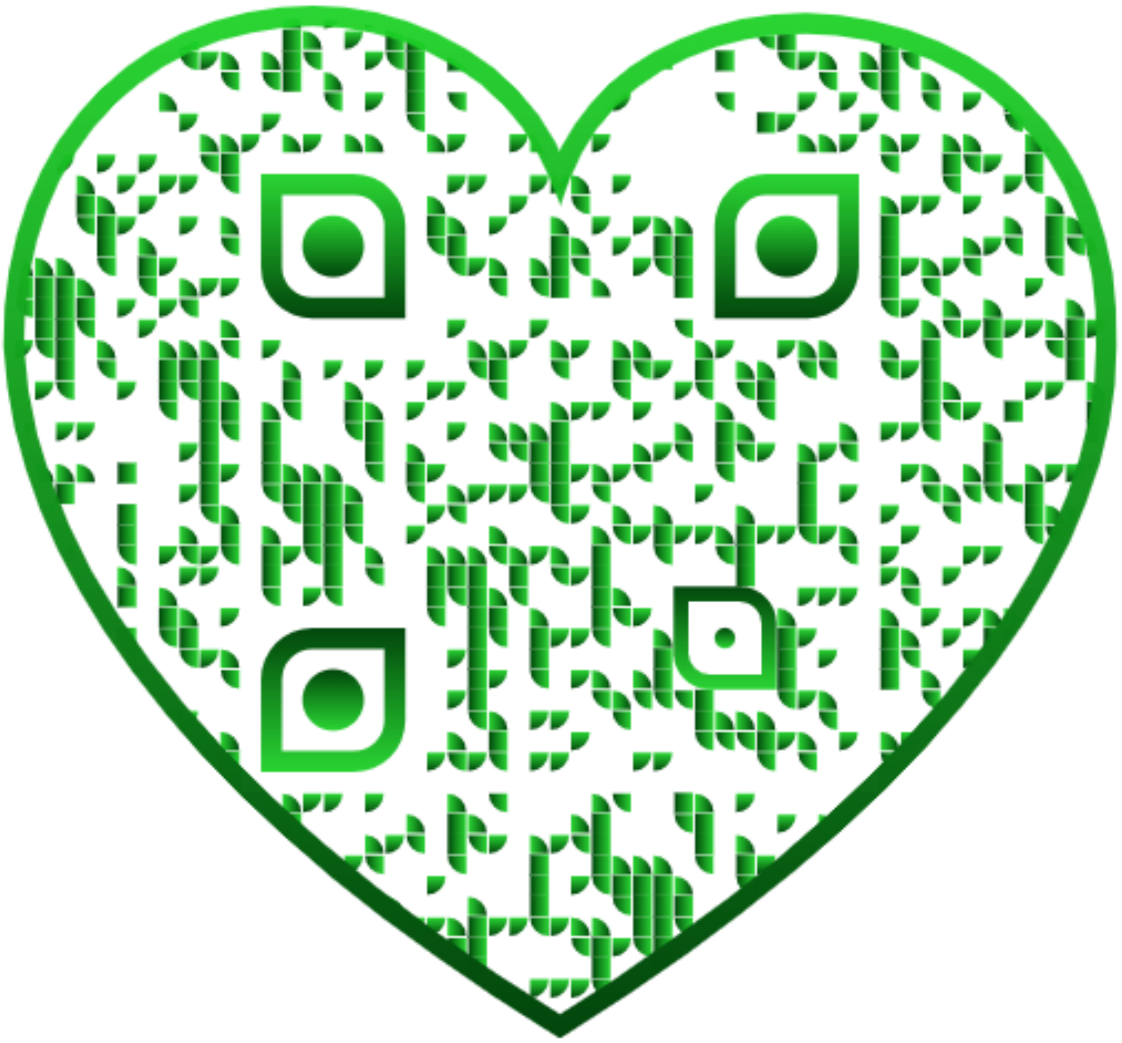
Sana'a University
Faculty of Medicine
Department of Human Medicine

PRACTICAL PARASITOLOGY

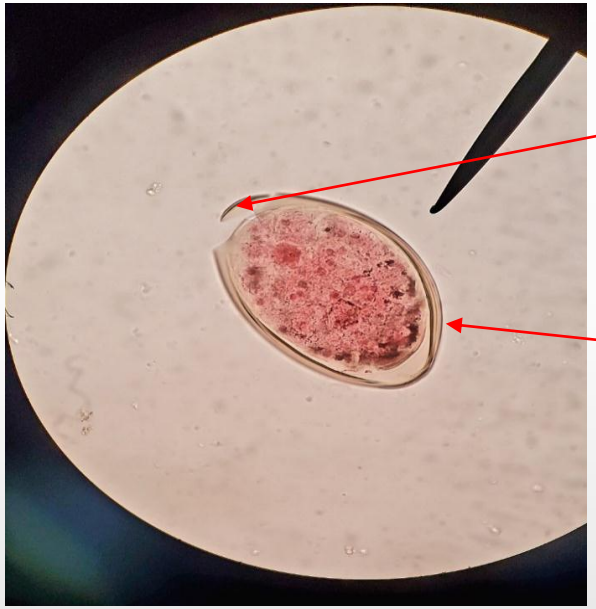
Overseen by:
Dr. Ameera Al-Qadasi

37A Batch (Group 4) - 3rd Year - 1st Term



TERMATODES

Liver (Hepatica) Flukes
- Fasciola hepatica
- Fasciola gigantica



operculum

Egg of Fasciola species

Notes:

Shape → oval, operculated and thin shelled

Color → yellowish brown.

Content → immature ovum

Liver (Hepatica) Flukes cont.

Notes:

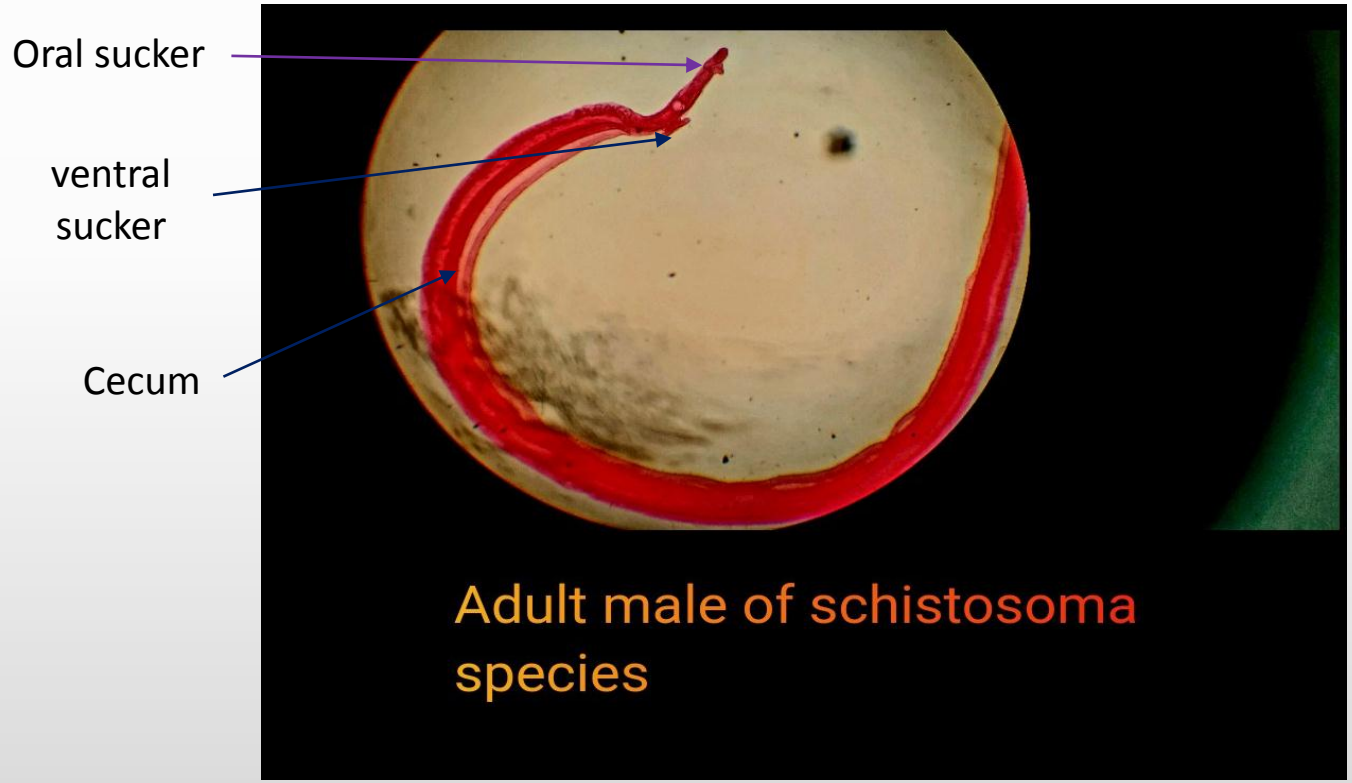
- Adult has 2 suckers (oral & ventral).
- Color → grayish-brown

Blood Flukes (Schistosoma)

Adult male of schistosoma species

Notes:

- Short and flattened.
- Suckers are well-developed.
- Posterior end is curved ventrally to form Gynaecophoric canal.
- Cuticle provided with tubercle.



Blood Flukes (Schistosoma) cont.

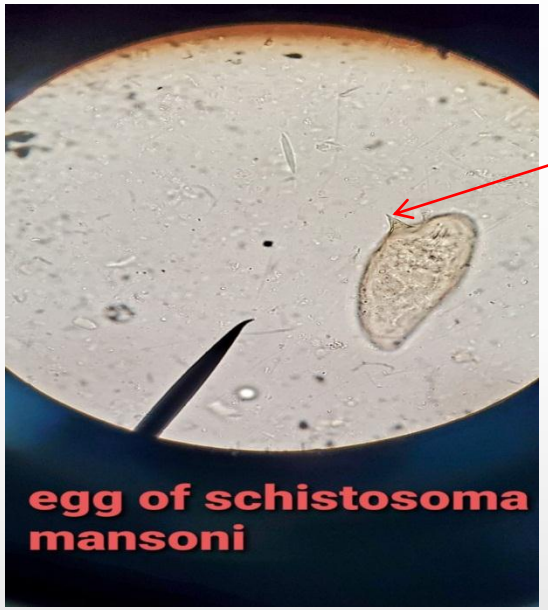
(Adult female of schistosoma species)

Notes:

- Long and slender. - Suckers are weakly developed. - Cylindrical with smooth cuticle.

Blood Flukes (Schistosoma) Cont.

Egg of schistosoma mansoni



Lateral spine

Notes:

- Oval with one well rounded pole and one conical pole.
- Has lateral spine and translucent in color

Blood Flukes (Schistosoma) Cont.

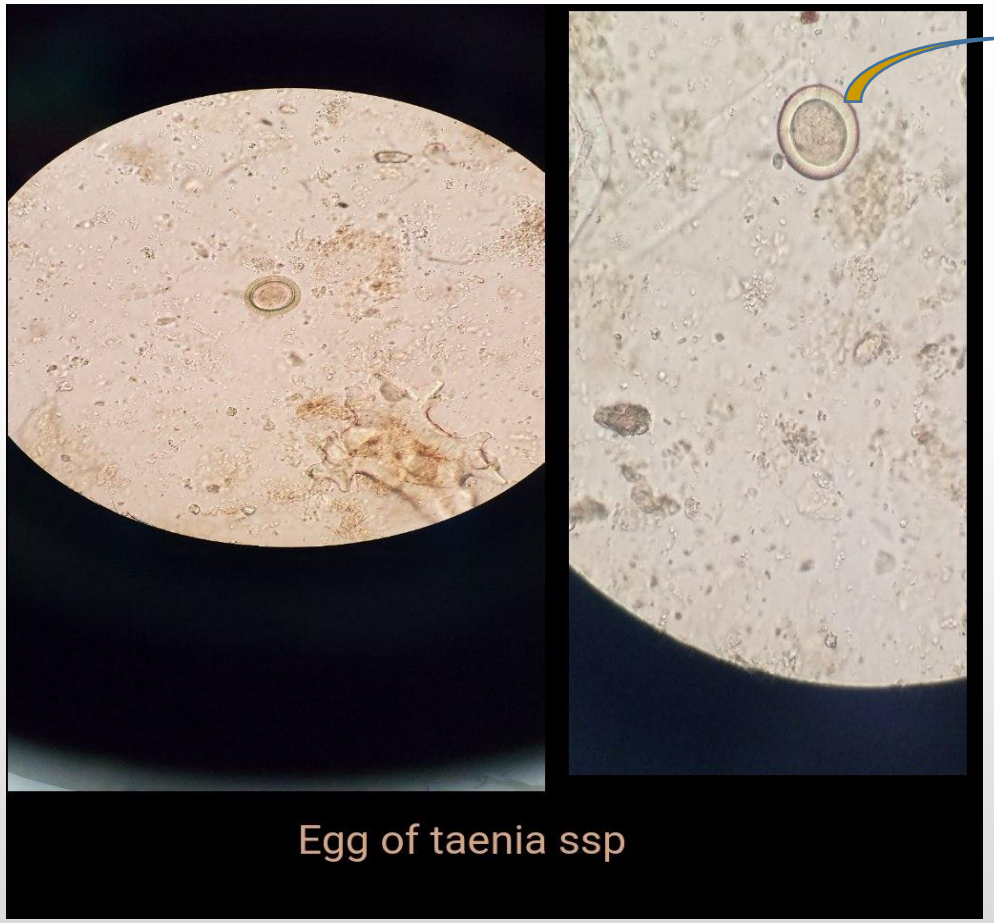
Egg of schistosoma hematobium

Notes:

- Oval with one well rounded pole.
- Has terminal spine and translucent in color

Cestodes

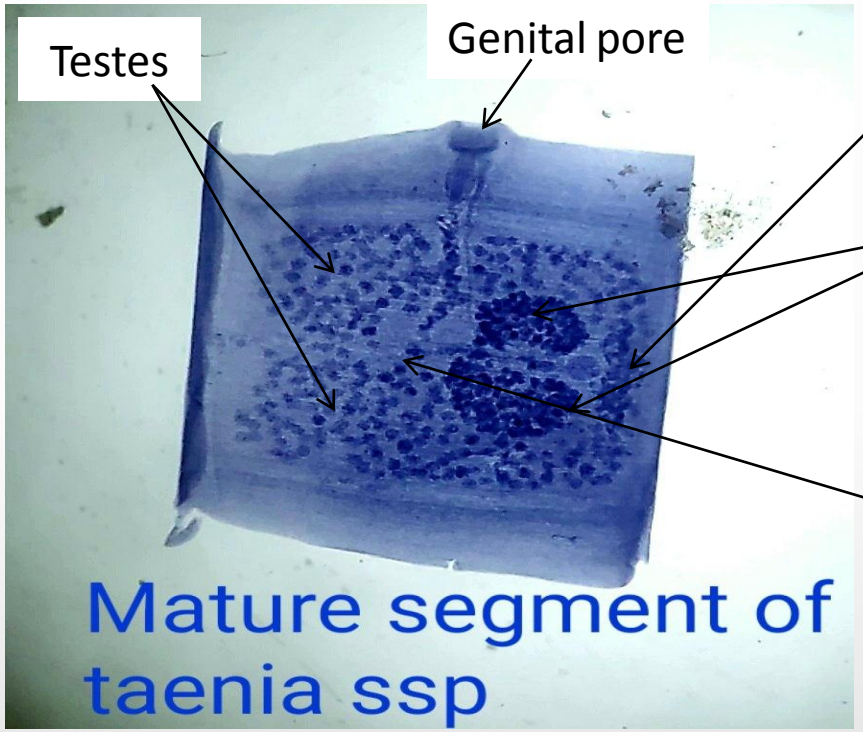
Tainea species

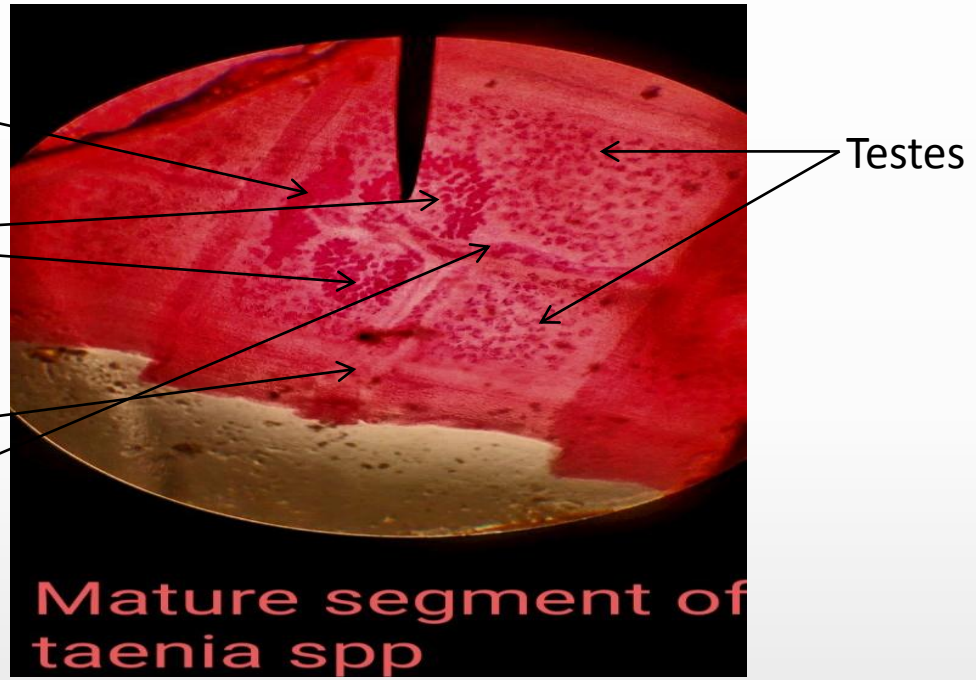


Notes:

- Rounded with radially striated shell and contains hexacanth oncosphere.
- Yellowish brown in color.

Tainea species cont.





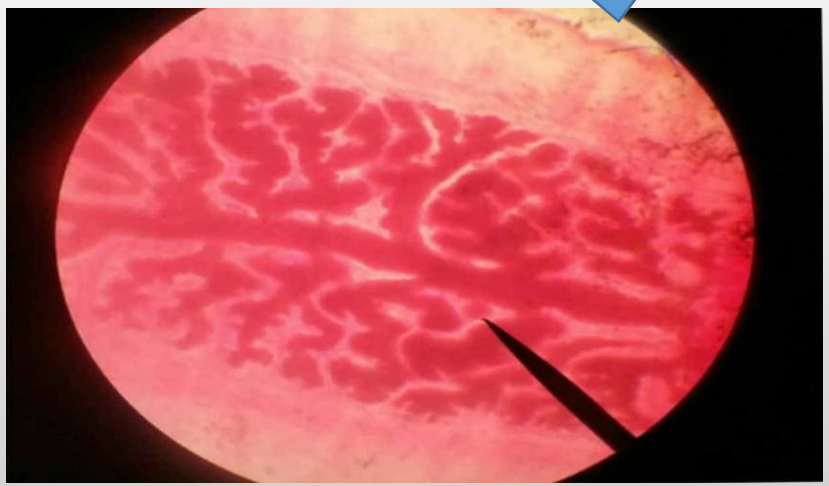
Notes:

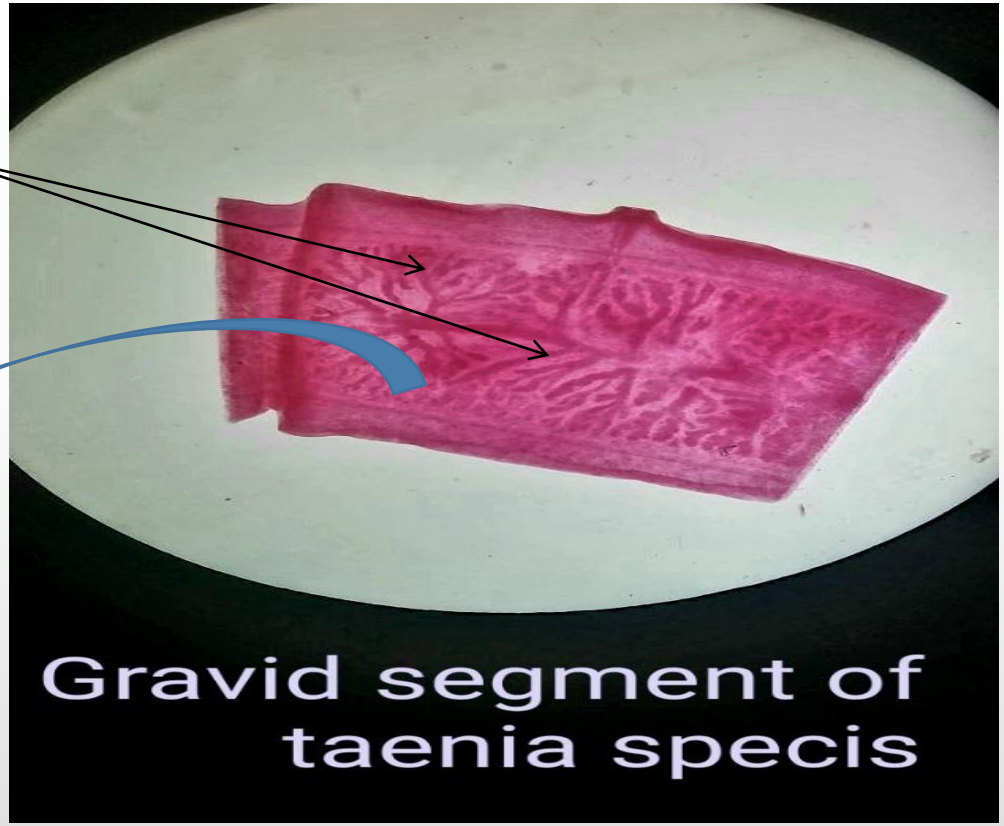
- Mature segments of taenia species contain mature genital organs.
- Testes are many in the anterior part while ovaries are bilobed (saginata) or trilobed (solium) in the posterior part.
- Uterus is longitudinal tube in the median line and the genital pore is marginal.
- Vitelline (yolk) glands are located posterior of the ovaries.

Tainea species cont.

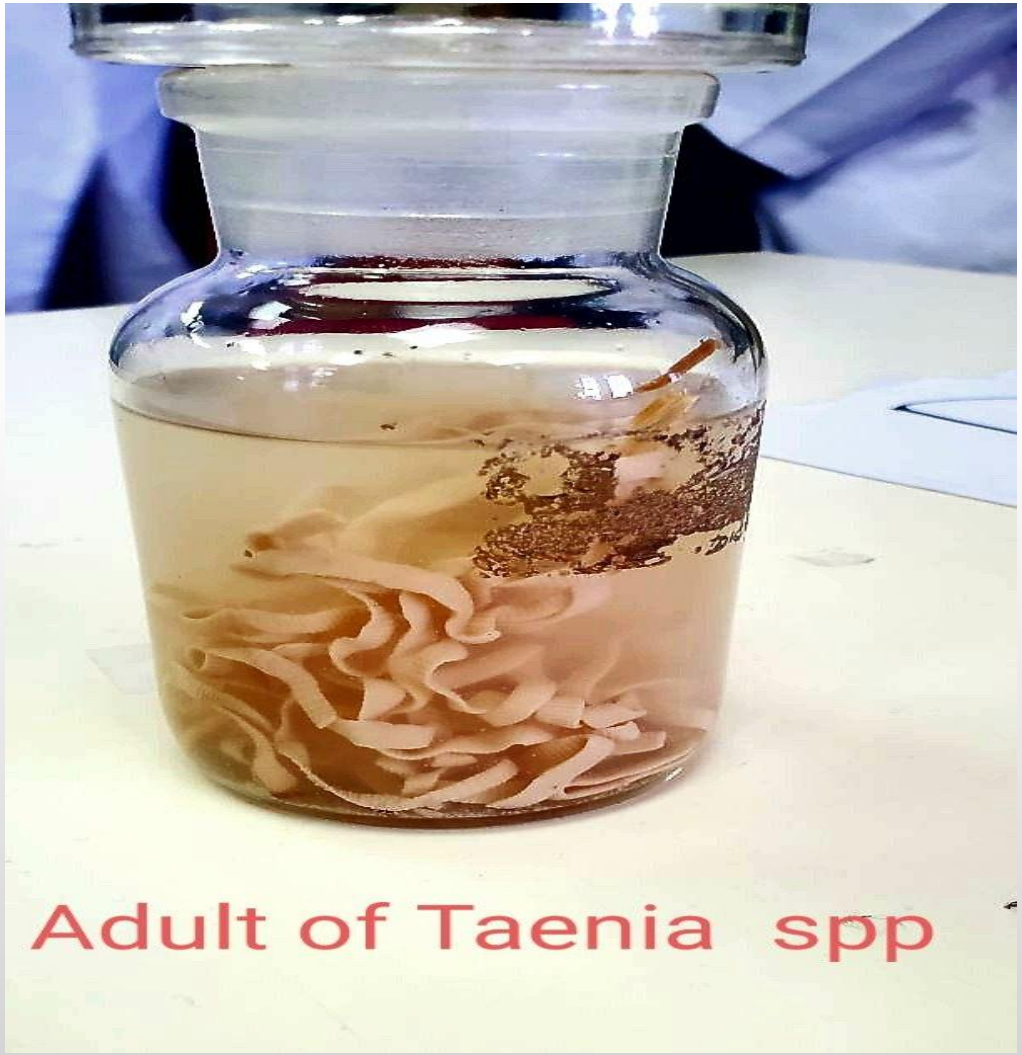
Notes:

- Gravid segments of taenia species are longer than broader.
- Contain only uterus with lateral branches on each side.





Tainea species cont.

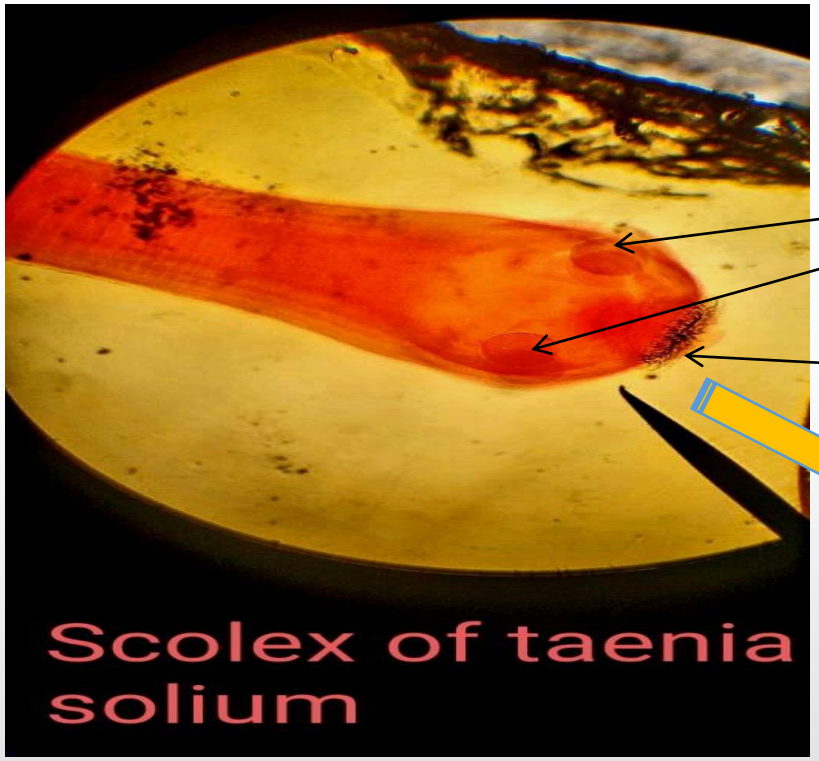


Tainea species cont.
(*Taenia Saginata*)

Notes:

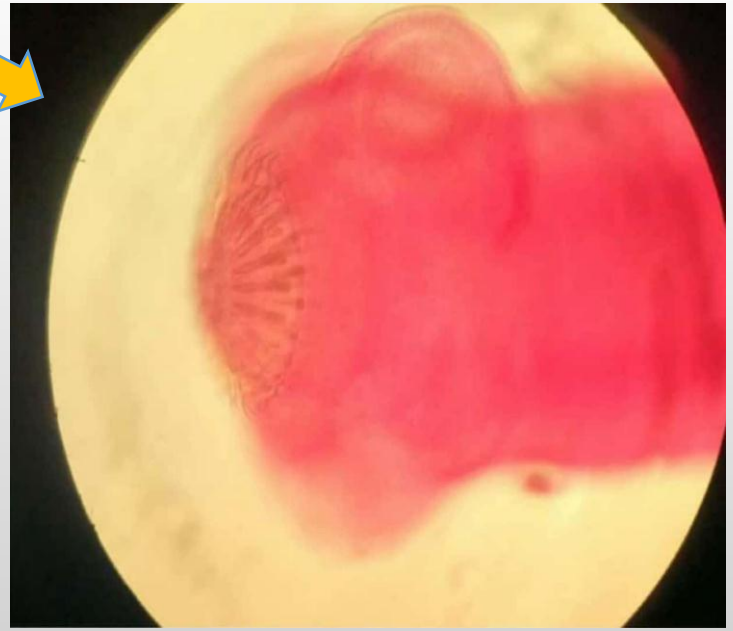
- Globular with 4 suckers (cup shaped).
- No rostellum or hooks.

Tainea species cont.
(*Taenia Solium*)



Suckers

Hooks



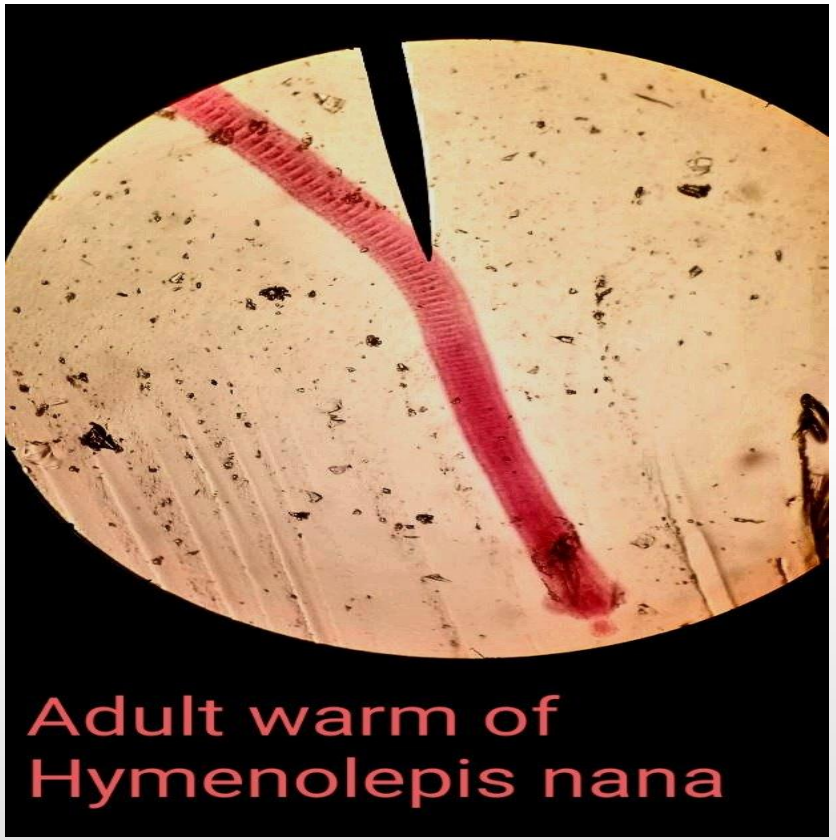
Notes:

- Has rostellum and 2 rows of hooks.
- Has 4 suckers.

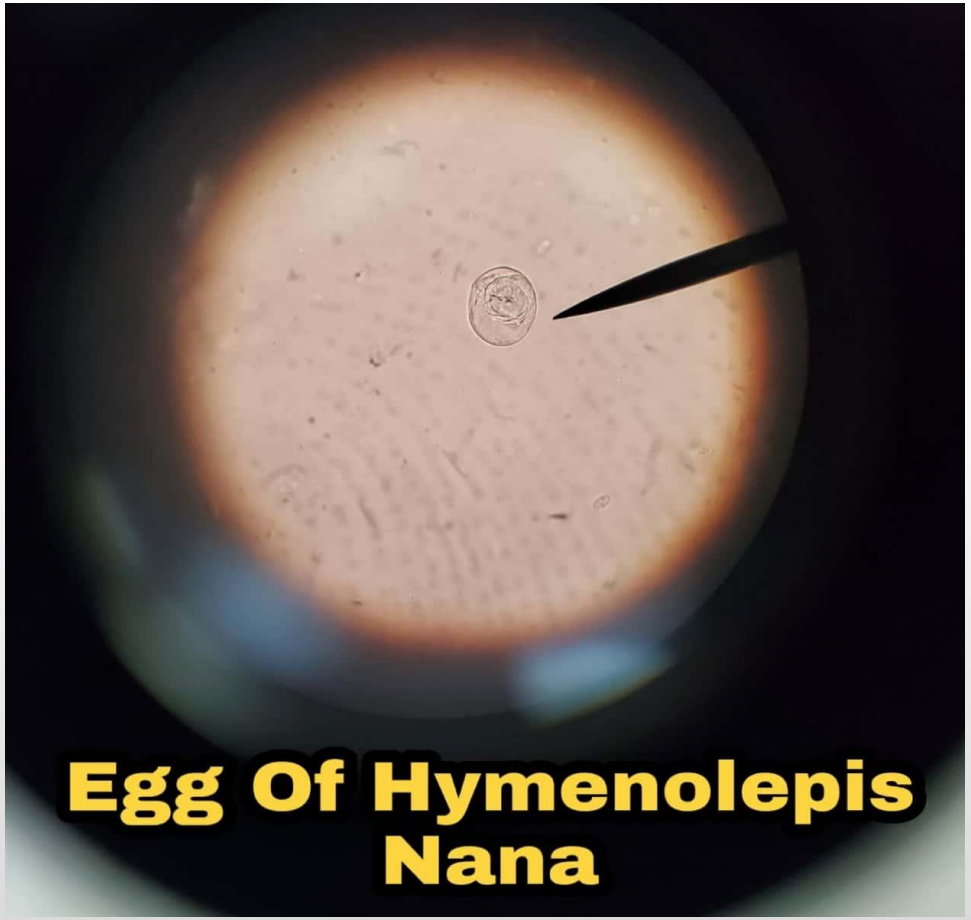
Hymenolepis nana

Note:

- Scolex is globular with 4 suckers and have rostellum with one row of small hooks.
- Mature segment is broader than long and has 3 testes & one ovary in the center of the segment.
- Genital pores are on the sameside.
- Gravid segment is brooder than long and the uterus is transversely Lying sac full of eggs.



Hymenolepis nana cont.

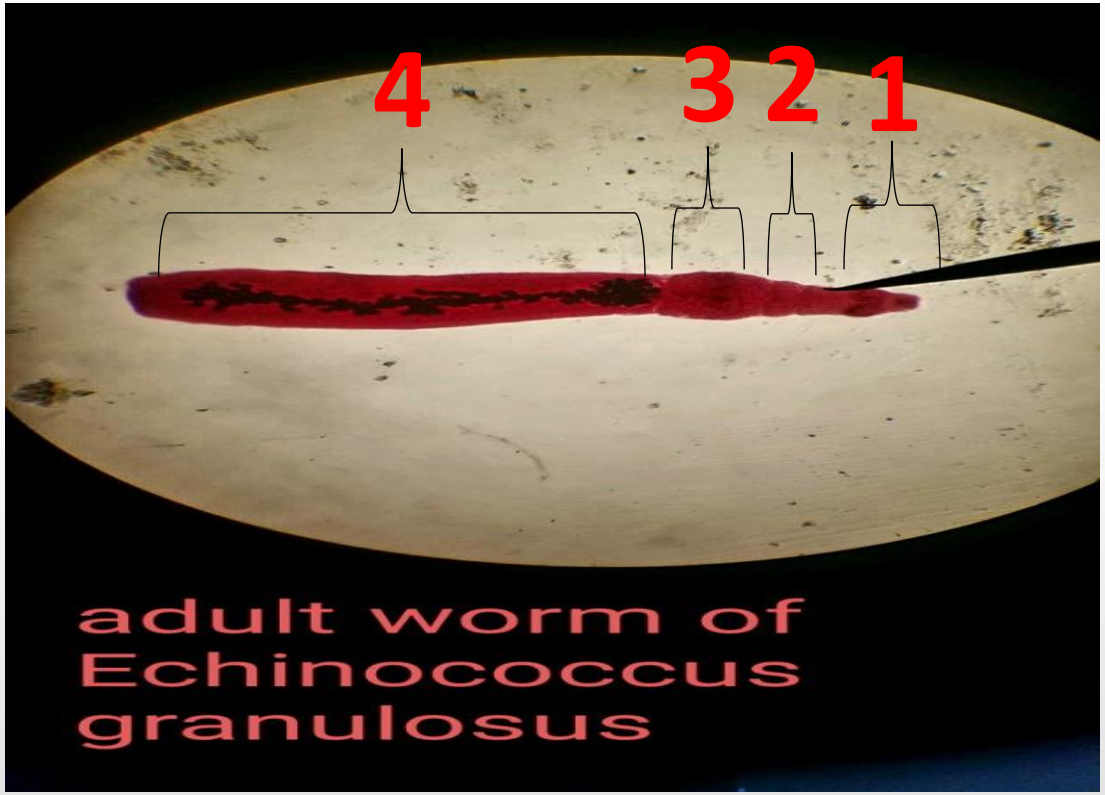


Notes:

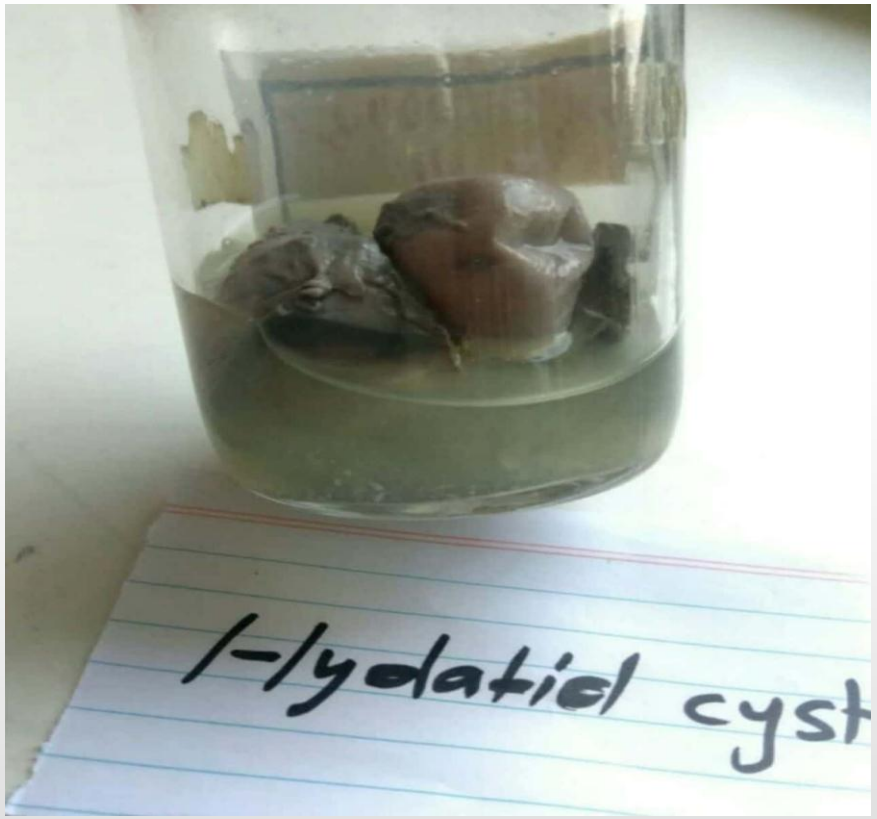
- Egg of H. nana is spherical, thin shell with 2 coverings

Echinococcus granulosus

1- scolex.
2- Immature segment.
3- Matture segment.
4- Gravid segment



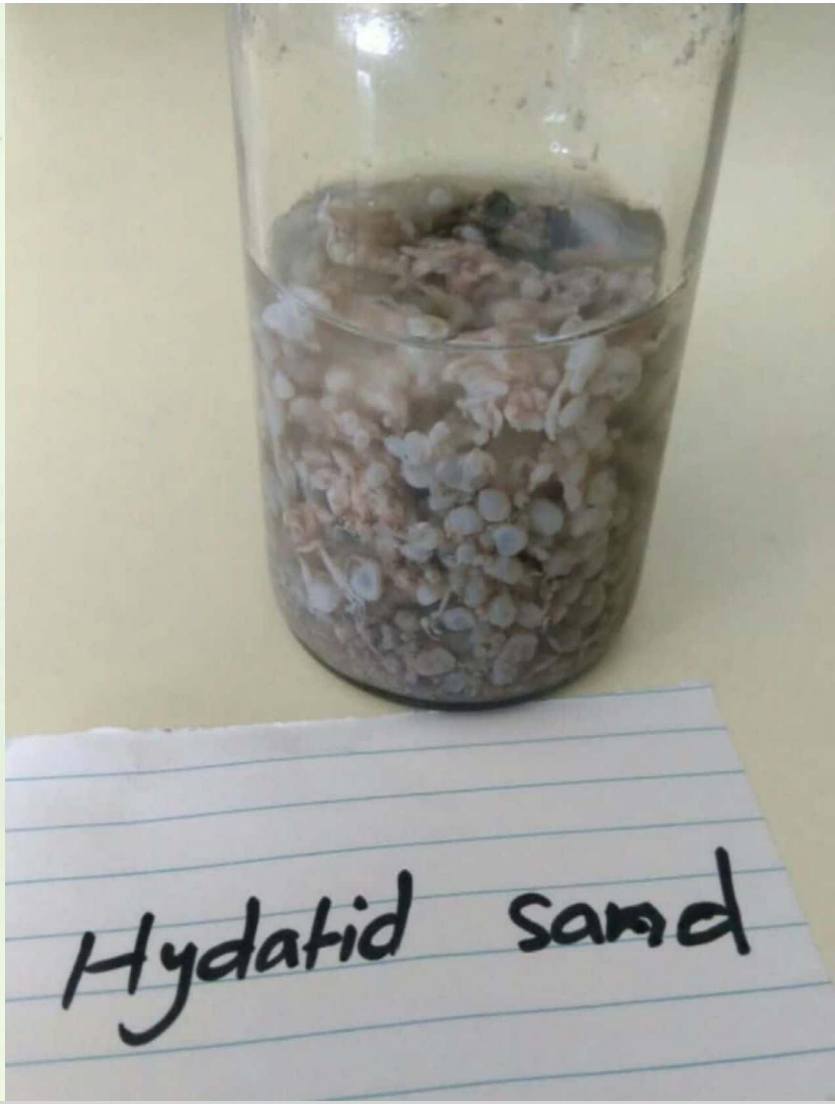
Echinococcus granulosus cont.



Notes:

- Hydatid cyst reaches 10 cm or more.
- Spherical filled with fluid and has 3 layers (Germinal – Laminated - Fibrous)

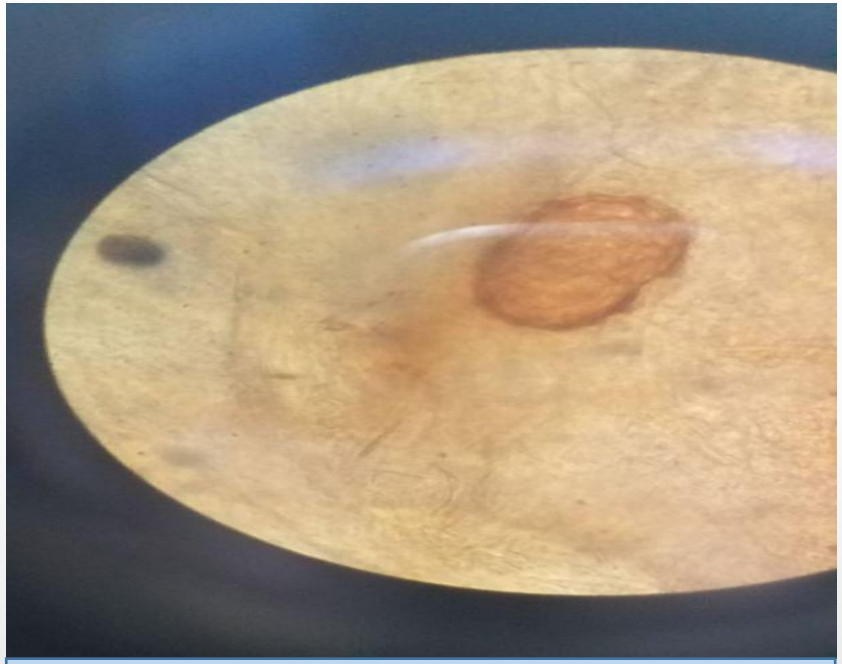
Echinococcus granulosus cont.



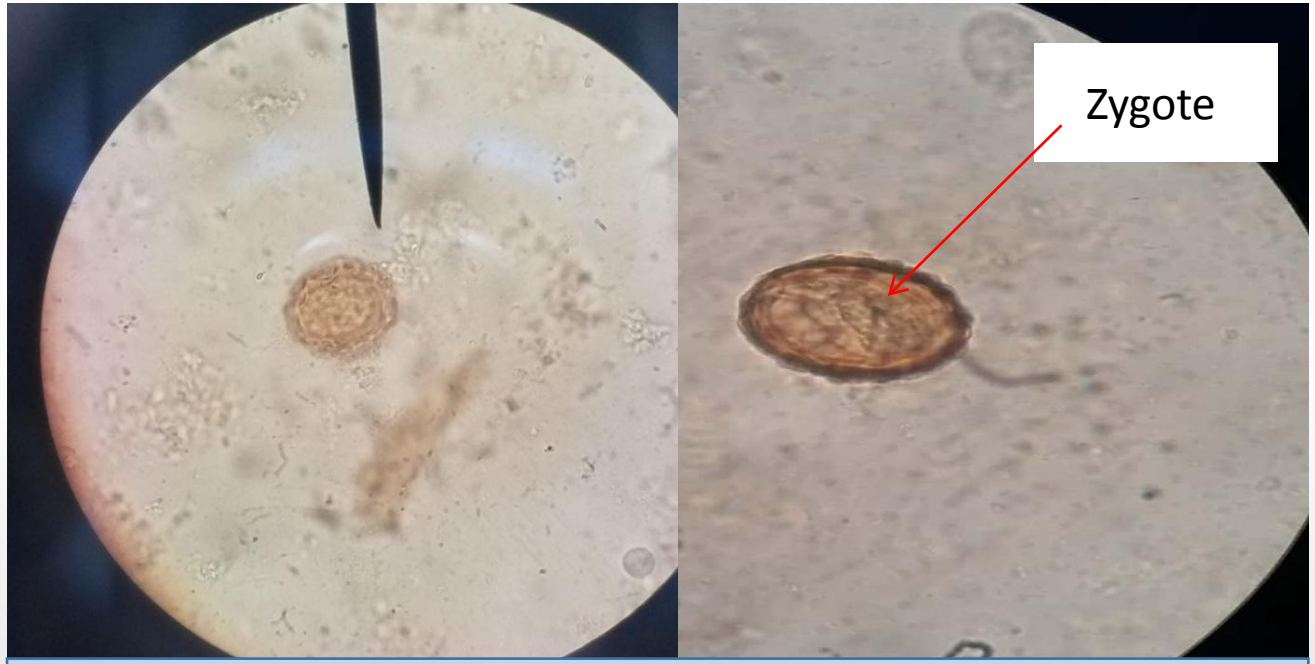
Nematodes

Ascaris lumbricoids

Egg of ascaris lumbricoids



Unfertilized egg



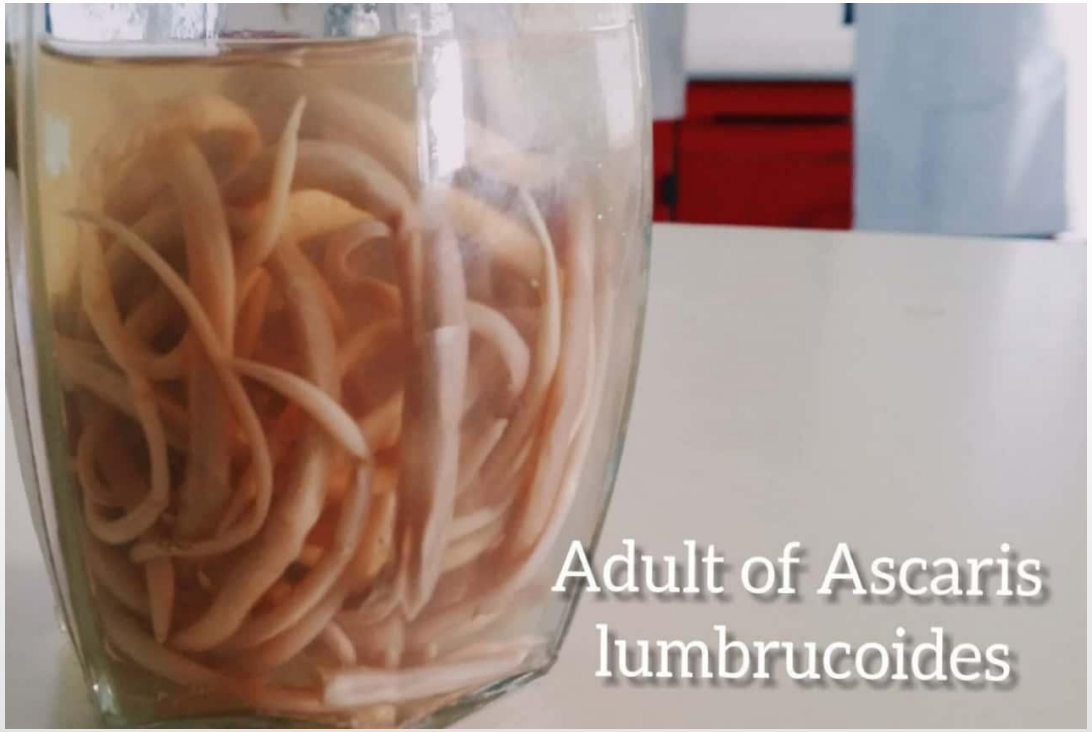
Fertilized eggs

Notes:
- Longer and narrow.
- Dark brownish in color.
- Thick and consist of mammillated albuminous coat.
- Contain unfertilized ovum (amorphous mass)

Notes:
- Spherical in shape.
- Light brown in color.
- Thicker and consist of mammillated albuminous coat.
- Contain fertilized ovum (zygote).

Ascaris lumbricoids cont.

Adult male and female of Ascaris lumbricoids

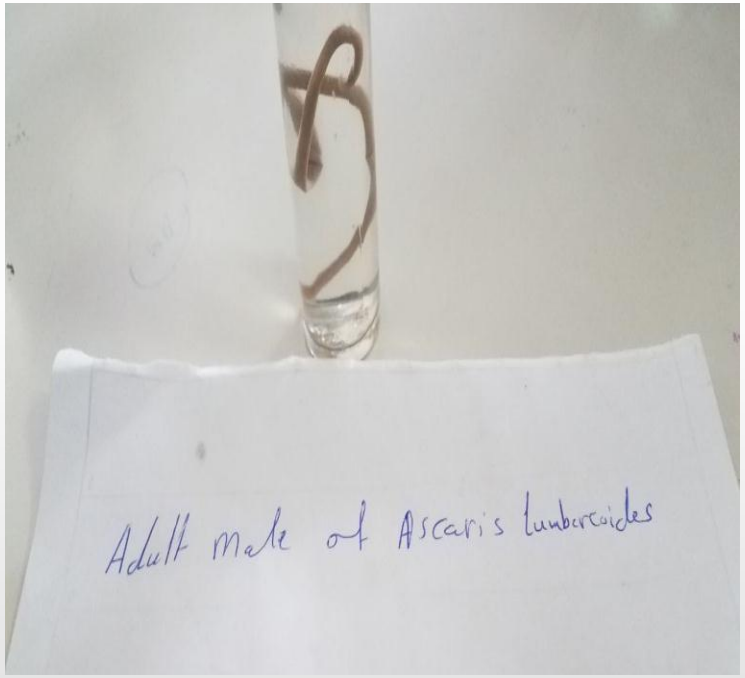


Notes:

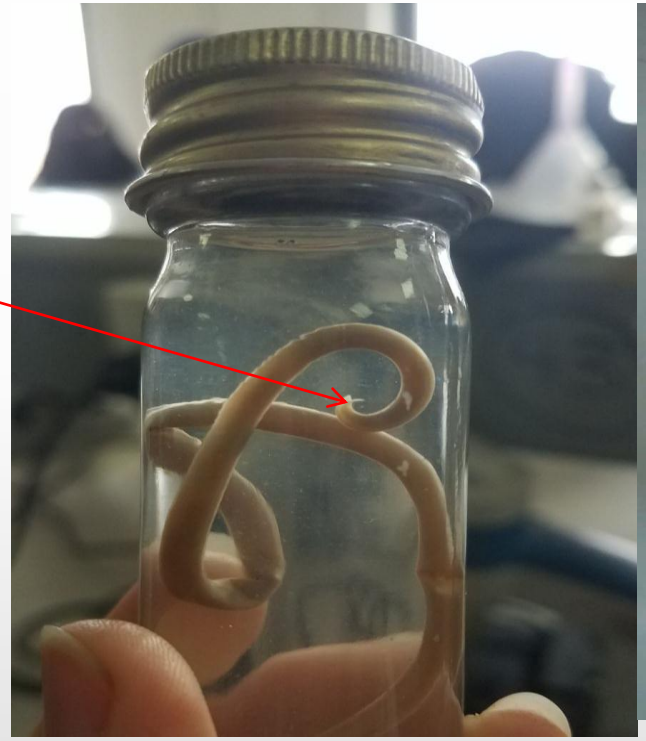
- Cylindrical in shape and creamy-white or pinkish in color.
- Long with tapering end.
- On the tip of the head, there are 3 lips arranged as a Chinese word “ ”

Ascaris lumbricoids cont.

Adult male of Ascaris lumbricoids



2 copulatory spicules



Notes:

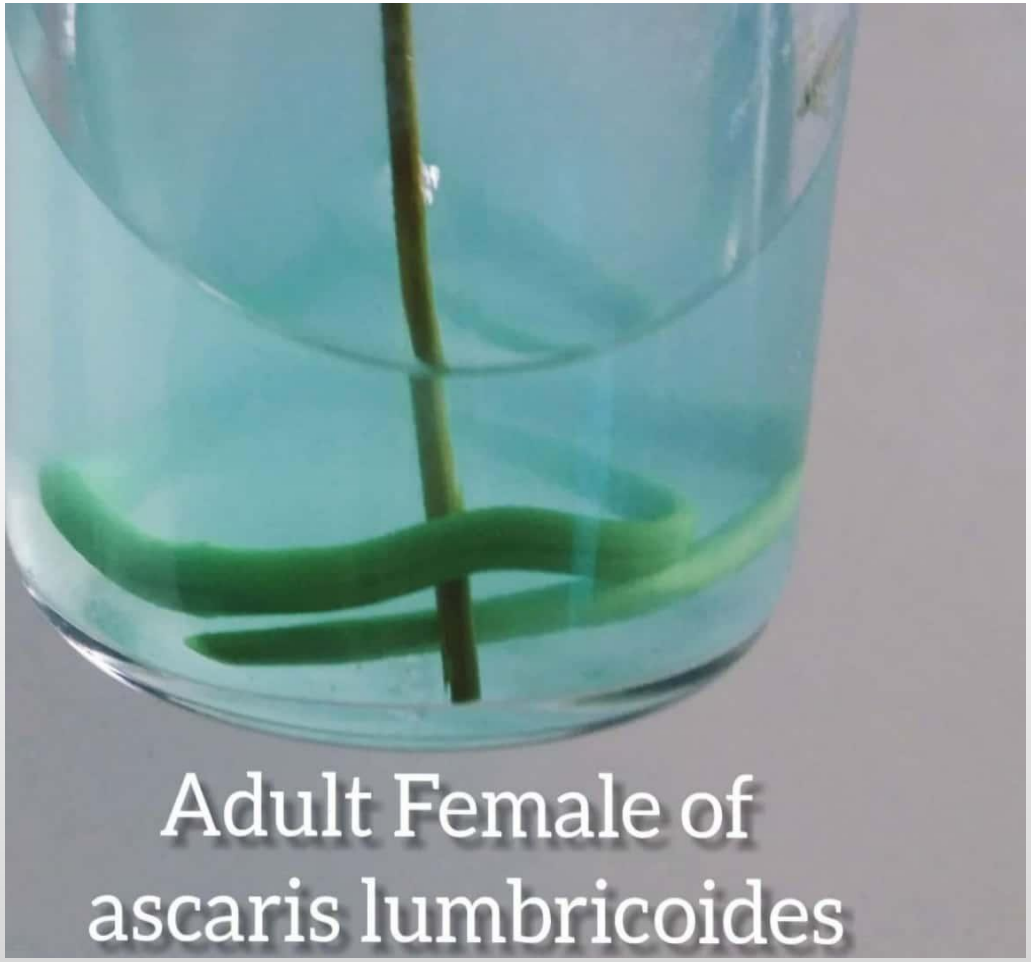
- Smaller than female and distinctly more slender than female.
- It has curved posterior end that contains 2 copulatory spicules.

Ascaris lumbricoids cont.

Adult female of Ascaris lumbricoids

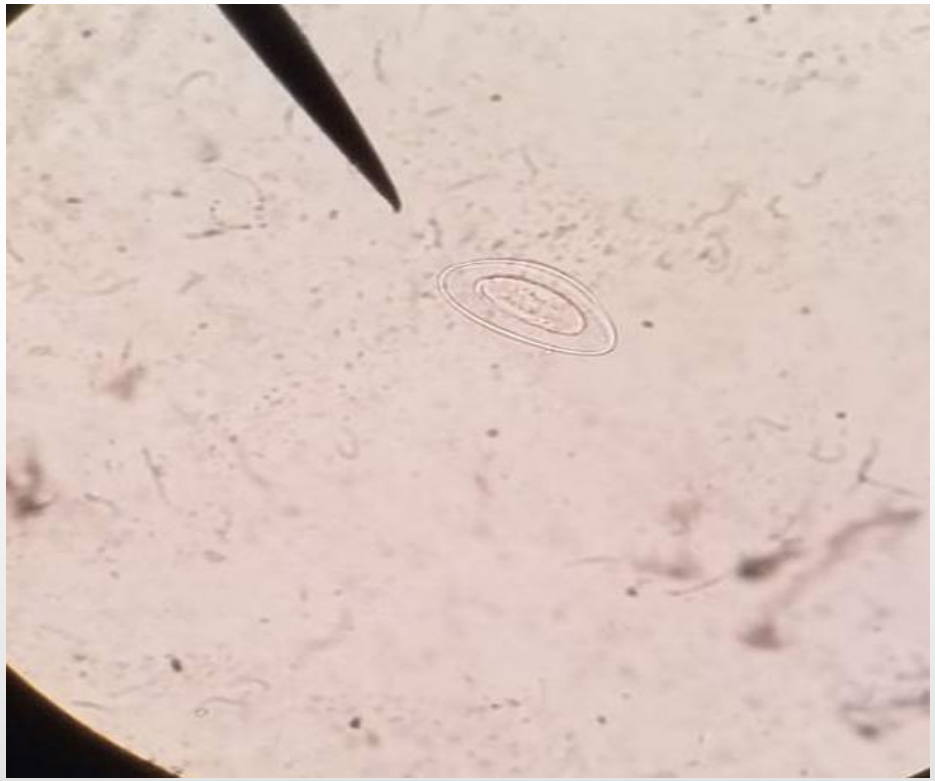
Notes:

- Longer than male.
- Has straight posterior end.



Enterobius vermicularis

Egg of Enterobius vermicularis



Notes:

- Colorless and Plano-convex (D-shaped) in shape.
- Its shell is double layered transparent.
- Contains tadpole shaped coiled larva.

Enterobius vermicularis cont.

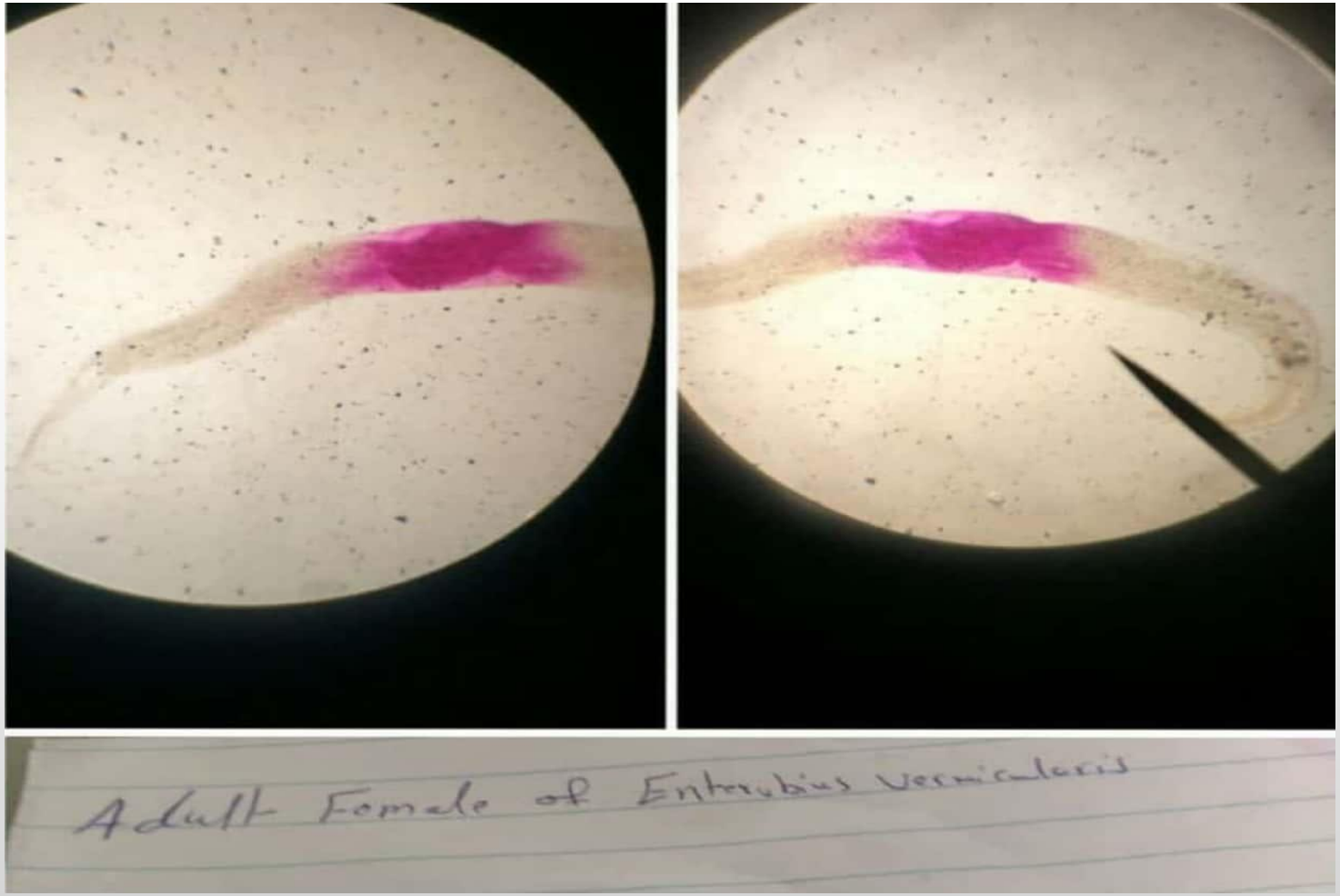
Adult female of Enterobius vermicularis

Enterobius vermicularis cont.

Adult female of Enterobius vermicularis

Notes:

- Has long, thin, pointed, pin-like tail.
- Reproductive organs are paired and T shaped.



تم بحمد الله

مع تحيات المجموعة الرابعة بدفعة 37A